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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

MAR 31 2004

In re application of

Ke Liu

Examiner: Tu Minh Nguyen

Serial No.: 10/789,512

Art Unit: 3748

Filed: February 26, 2004

Docket No.: C-2836B

Title: REDUCING OXIDES OF NITROGEN USING
REFORMATE GENERATED FROM ENGINE
FUEL, WATER AND/OR AIR

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facsimile transmitted to the Patent and Trademark
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March 31, 2004.

PRELIMINARY REMARKS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Barbara Cecere

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Sir:

These preliminary remarks respond to the Advisory Action dated January 8, 2004
in the parent application.

Herewith is a declaration of Roger R. Lesieur under 37 CFR 1.132.

The third sentence on page 3 of the Advisory Action is inaccurate: first, it isn't
that an endothermic reaction is "required" or "needed"; it is instead, that if the reactants
(either water or air) are adjusted, the endothermic reaction or the exothermic reaction will
occur. The third sentence on page 3 of the Advisory Action is also wrong because it says
both an endothermic reaction and an exothermic reaction are "required" or "needed" to
reform the hydrocarbon fuel to yield hydrogen and CO. That is not what Komatsu teaches.

The underlined portion of page 3 does not come from Komatsu; it is the creation of
the Examiner; it is totally unsupported in Komatsu; and it is wrong!

Boegner et al (Boegner) shows a mini-POx (mini-E-catalyst 16) and teaches, at the
bottom of column 5, "The exhaust gas has a higher temperature than supplied air so that
less energy is required for heating the mini-E-catalyst 16, which improves the overall
energy balance of the system." Boegner uses a partial oxidation reaction.

Komatsu teaches, at the top of column 6, "by increasing supply of water for
therby increasing the water vapor reformation reaction and the decreasing supply of air for